Adrian C. **Lo**

Statistical Programmer
Data Analyst

June 30, 1984 (Belgium)
Bülach (ZH), Switzerland
+41 78 653 92 08
adrianclo1984@gmail.com
github.com/adrianclo

About Me

I have a background in theoretical psychology and **statistics**. During my academic career, I studied and analyzed rodent behavior and molecular biology, but also gained expertise in developing **R programs**, **shiny apps** and **automated reports**. With these tools, I improved the speed and efficiency of data-processing for myself as well as colleagues.

Languages

- Dutch (native)
- English
- French
- Chinese (Cantonese)
- German

Computer Skills

- R
- Visualization (ggplot2)
- Excel
- R Shiny
- R Markdown
- SAS
- Excel (macro/VBA)
- Power BI
- Tableau
- Machine Learning
- Git/Github
- SQL
- Python
- SPSS
- JavaScript
- LaTeX
- HTML

Work Experience

2022 – present — **Statistical Programmer (BARDS HTA)** — MSD, Switzerland
- Produce TLFs for clinical SAS projects
- Collaborator in innovation initiatives with R

2021 – 2022 — **Clinical Data Manager (GDO)** — MSD, Switzerland
- Review and curation of clinical trial data
- Supporting clinical trial teams with programming solutions

2016 – 2021 — **Neuroscientist** — Université de Lausanne, Switzerland
- Post-doctoral research on the role of RNA binding protein FXR2P in status epilepticus: Behavioral and molecular evaluation (Laboratory of Prof. Claudia Bagni)
- Reference person within the research group on issues related to statistics and programming

2014 – 2015 — **Neuroscientist** — KU Leuven, Belgium
Post-doctoral research on cue competition and contextual fear learning in rodents and humans. (Laboratory of Prof. Bram Vervliet)

Education

2008 – 2013	PhD in Behavioral Neuroscience	KU Leuven, Belgium
2003 – 2008	MSc in Theoretical Psychology	KU Leuven, Belgium

Certificates and Courses

02/2015	R programming	John Hopkins Univ., Coursera
12/2019	Advanced R Shiny	SIB, Switzerland
09/2015	Introduction to SAS	LSTAT, Belgium
12/2020	Databases and SQL for Data Science	IBM, Coursera
01/2019	Data Management Plan	SIB, Switzerland
10/2018	Project Management	EPFL, Switzerland
06/2018	Statistical Methods for Big Data in Life Sciences and Health with R	SIB, Switzerland
09/2018	Introduction to Data Analysis with Python	EPFL Extension School, Switzerland
12/2022	Applied Data Science Program	MIT Professional Education, USA

My R programs portfolio

meaR (public repository: click here to review it)
Extracts numeric data from exported Micro-Electrode Arrays text files that contain *in vitro* electrophysiological measurements. {meaR} performs calculations for a variety of quantitative parameters and visualizes spike and burst activity for all 60 electrodes over time

phenotyper (public repository: click here to review it)
For the processing and analysis of Phenotyper data, we can use a cloud service upon payment. Through **reverse engineering**, I designed the {phenotyper} program that performs similarly to the cloud service and calculates additional behavioral parameters

dam3 (public repository: click here to review it)
A pipeline to process Trikinetics DAM behavioral data from *Drosophila*. **Longitudinal data** where behaviors are categorized as either sleep or awake state. Quantitative and qualitative sleep parameters are calculated

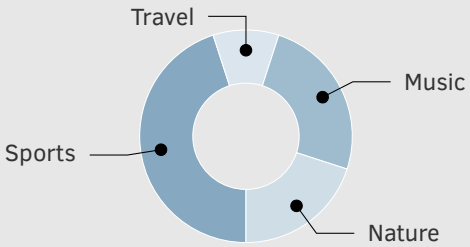
easyGeno (private repository, available for discussion)
A pipeline workflow for mouse genotyping including identification of the sample's model, pre-mix calculations, and planning of the assembly plates for PCR and electrophoresis. Manually, these can easily take up to half a day time. {easyGeno} produces an **automated report** through R Markdown containing all the steps for the user to follow and optimized for the QIAxcel apparatus. Additional follow-up module was developed that extracts the result from the QIAxcel pdf report and **cross-references with our database file** to automate band and genotype identification

Adrian C. **Lo**

Statistical Programmer
Data Analyst

Soft Skills

Extra-Curricular Activities



Driver's license: B (2003)

Teaching/Coaching Experience

2022-present **BAAMR** — MSD, Switzerland
R Coach for R trainings in tidyverse coding (level 1) and R package development (level 2)

2019-2020 **Coding Club** — Université de Lausanne, Switzerland
Interactive course between PhD students and Postdocs on how to use R for data import, manipulation, visualization and analysis

09/2015 **Workshop at Summer School** — KU Leuven, Belgium
Subject: "The use of rodent models in fear conditioning, learning and memory

2013 **Bachelor Course at KU Leuven** — B-KUL-P0M20B
How to use SPSS for basic data manipulation, statistics and SPSS output interpretation

Conferences and Presentations

2022 **SCDM Conference** — Basel, Switzerland

2018 **NCCR-SYNAPSY Conference** — Geneva, Switzerland
Cognitive flexibility in a mouse model for Fragile X Syndrome

2014 **RIKEN Brain Science Institute** — Tokyo, Japan
Treatment with tauroursodeoxycholic acid modulates γ-secretase activity and rescues memory deficits in APP/PS1 mice, an AD mouse model

2012 **International Stockholm/Springfield symposium on advances in Alzheimer's disease** — Stockholm, Sweden
Behavioural effects of selenium in mouse models of Alzheimer's disease

2010 **Forum of European Neurosciences** — Amsterdam, The Netherlands
Reversible changes in neurocognitive performance and hippocampal synaptic plasticity in tau mutant mouse lines

Publications (5 most recent)

For the full list, please click here

2023 ***Neuron***
Altered striatal actin dynamics drives behavioral inflexibility in a mouse model of fragile X syndrome [link]
Mercaldo V, Vidimova B, Gastaldo D, Fernández E, **Lo AC**, Cencelli G, Pedini G, De Rubeis S, Longo F, Klann E, Smit AB, Grant SGN, Achsel T, Bagni C.
Nature Communications
SREBP modulates the NADP+/NADPH cycle to control night sleep in Drosophila [link]
Mariano V, Kanellopoulos AK, Aiello G, **Lo AC**, Legius E, Achsel T, Bagni C.

2021 ***BioRxiv***
Scopolamine blocks context-dependent reinstatement of fear responses in rats [link]
Vercammen, LM, **Lo AC**, D'Hooge R, Vervliet B.
EMBO Reports
Absence of RNA binding protein FXR2P prevents prolonged phase of kainate-induced seizures [link]
Lo AC, Rajan N, Gastaldo D, Telley T, Hilal ML, Buzzi A, Simonato M, Achsel T, Bagni C.

2019 ***Nature Communications***
The autism- and schizophrenia-associated protein CYFIP1 regulates bilateral brain connectivity and behaviour [link]
Domínguez-Iturza N, **Lo AC**, Shah D, Armendáriz M, Vannelli A, Mercaldo V, Trusel M, Li KW, Gastaldo D, Santos AR, Callaerts-Vegh Z, D'Hooge R, Mameli M, Van der Linden A, Smit AB, Achsel T, Bagni C.